

|                            |                |               |  |
|----------------------------|----------------|---------------|--|
| Species Tag:               | 9001           | Species Name: | LiD                                      |
| Version:                   | 1              |               | Lithium deuteride,                       |
| Date:                      | Aug 1995       |               | <sup>7</sup> Li, <sup>2</sup> H isotopes |
| Contributor:               | M. L. Delitsky |               | $\nu = 0, 1$                             |
|                            | H. M. Pickett  |               |  |
| Lines Listed:              | 40             | Q(300.0)=     | 50.812                                   |
| Freq. (GHz) <              | 4772           | Q(225.0)=     | 37.915                                   |
| Max. J:                    | 20             | Q(150.0)=     | 25.314                                   |
| LOGSTR0=                   | -20            | Q(75.00)=     | 12.807                                   |
| LOGSTR1=                   | -100           | Q(37.50)=     | 6.573                                    |
| Isotope Corr.:             | -3.85          | Q(18.75)=     | 3.469                                    |
| Egy. (cm <sup>-1</sup> ) > | 0.0            | Q(9.375)=     | 1.938                                    |
| $\mu_a =$                  | 5.882          | A=            |  |
| $\mu_b =$                  |                | B=            | 125538.0                                 |
| $\mu_c =$                  |                | C=            |  |

The transition frequencies were taken from: Maki, Olson and Thompson, 1990, J. Mol. Spect. **144**, 257. Plummer, Herbst and De Lucia , 1984, J.Chem. Phys., **81**, 4893. E. F. Pearson and W. Gordy, 1969, Phys. Rev. **177**, 59.

The observed line in Plummer, *et al.* for  $J = 1 \leftarrow 0$   $\nu = 0$  was a typographical error (Herbst, personal communication, 8/95). The correct 251043.53 MHz line frequency of Pearson and Gordy was used in our calculation.

The dipole moment is from L. Warton, L. P. Gold and W. Klemperer, 1960, J. Chem. Phys. **33**, 1255. It has been assumed to be the same for all isotopomers.